

REMARKS

The present application has been carefully studied and amended in view of the outstanding Office Action dated March 22, 2004, and reconsideration of that Action is requested in view of the following comments.

A petition for a one-month extension of time accompanies this response together with the appropriate fee. Accordingly, the deadline for responding to the Office Action has been extended until July 22, 2004, and this response is therefore timely filed since it was deposited in the mail for First Class Delivery Service on the date certified on the front page hereof.

Claim 1 has been amended to recite the correct temperature range at which the recited mixed catalyst is subjected. The presently recited temperature range of -20° to 50°C is set forth in the specification at page 4, line 7.

Applicant respectfully submits that the claims herein are not anticipated or rendered obvious by the prior art taken alone or in combination with one another. Specifically, claims 1-7 are not rendered anticipated by Spencer et al US 5,633,419 ("Spencer"), claims 1-3 and 5-7 are not anticipated by Marchand et al US 4,910,272 ("Marchand") and claims 1 and 5-7 are not anticipated by Heinrich et al US 5,292,837 ("Heinrich"), for the following reasons.

Spencer discloses an olefin polymerization process comprising contacting the olefins with a catalyst. As the Examiner points out, Spencer has not measured MFR15 values or Mw/Mn values. Moreover, the reference discloses a special catalyst system, which essentially consists of a solid support (A), a magnesium halide (B), a

halogenating agent (C), a transition metal of group 4 or 5 (D) and an organometal compound of group 2 or 13 (E), as recited in Spencer claim 1.

Unlike Spencer, the process of the present invention uses a catalyst prepared by reacting a Ti(IV) compound with an organic aluminum compound at -20° to 50°C in a suspension for 0.5 to 60 minutes. This is significantly different from the catalyst disclosed by Spencer. Neither magnesium halide nor a solid support is used. Therefore, the products obtained by the process of the present invention are different from the products described by Spencer.

According to the present invention, the particle size of the catalyst is determined by the activation temperature of the catalyst. This can influence the particle size of the polymer, which correlates with the particle size of the catalyst solid because of the replication behavior due to the multigrain behavior (See specification, page 4, lines 17 to 20).

Marchand discloses a catalyst for polymerizing olefins obtained by mixing an inorganic oxide (A), an organomagnesium material (B), an organic hydroxyl-containing material (C), a reducing halide source (D), and a transition metal compound (E).

No such catalyst system is used in the process of claims 1-3 and 5-7. The present catalyst system and the conditions for preparing the catalyst are not disclosed or suggested by Marchand.

Turning now to Heinrich, this reference discloses a catalyst which comprises magnesium alkoxide, a tetravalent transition-metal compound (incl. Ti), an organo-aluminium compound, a metal halide and a trialkyl-aluminium compound. Unlike

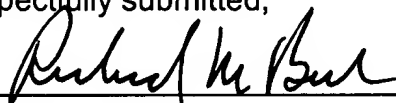
Heinrich, the present catalyst is prepared by reacting a Ti(IV) compound with an organic aluminum compound. Magnesium alkoxide is not utilized.

Accordingly, for the reasons expressed above it is quite clear that the present claims distinguish over the prior art of record. These claims are now believed to be in condition for allowance and Notice to that effect is respectfully requested.

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Respectfully submitted,

By



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